MR. HALSTEAD: Thank you, Barry. For the record, Bob Halstead, Nevada Agency for Nuclear Projects. I assume the people who are still here find this still to be an entertaining topic. And I'm ready to go home soon, but I'm sure other commenters might say things that would require an answer in the record.

Several times tonight we have heard references to the fine safety record of nuclear

transportation in the United States and abroad. And certainly, on the face of it, when you look at the number of shipments and the number of accidents, you can say it's a better than average record for hazmat shipments. It's certainly not a perfect record, and we've written extensively on this. And I'll be happy to provide documents -- to anyone who leaves me a card and their address -- that puts the larger issue with statistics in a proper perspective.

There are three particular points, though, that I would like to make for the record tonight.

1... First of all, the international experience with spent nuclear fuel shipments is absolutely irrelevant to what we're talking about in this EIS. I will not belabor the point except to say most of the long-distance experience in the international arena is with water transportation, not being proposed in the U.S.. And as Eileen said, most of the land-shipment experience is in England or in France, to a lesser extent in Germany, with relatively short land shipments. Until someone makes a compelling case that those shipments are relevant based on the comparability characteristics that the shipments that are being

proposed for Yucca Mountain, I suggest we put that one to sleep.

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Now, a more interesting question is, how relevant are the past shipments in the United States, given their characteristics? I would argue first that the naval fuel shipments are of no relevance whatsoever because of robust physical construction of naval reactor fuel which, after all, is designed for combat conditions and, secondly, because of the special protocols under which that fuel is shipped.

The real issue is, how relevant are the past shipments of the civilian industry in the United States to what's being proposed for Yucca Mountain? Turn to the database maintained by the Nuclear Regulatory Commission. The best data that we have comes from that source through the public circular, the public information circular on irradiated fuel shipments. That database begins in 1979. It doesn't include a few of the DOE shipping campaigns like the across-country shipments from Surrey and Three Mile Island to Idaho, but it includes just about everything else including a lot of research reactor shipments. And when people give you this 3,000 shipments, you

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know, a lot of these shipments contained a piece of a fuel rod, small research reactor assembly, and are in no way comparable to what the Department of Energy is proposing. So look, for example, at what the numbers are. Amount shipped between 1979 and 1995: a total of 1,335 metric tons uranium. That's an average of 79 metric tons uranium. Okay, that's equivalent to about eight casks that the DOE will ship in the future. Look at the total number of shipments in that period: 1,306. That's an average of 77 shipments per year. You know, they'll be shipping more than that per month, in some cases maybe that much by week under one of the scenarios that they're talking about in the Draft EIS. Now, in the past, truck shipments have made up 89 percent of all their shipments, not a very good experiential base for people who are talking about a heavily rail scenario, although I will argue that in fact they'll be real lucky if they move 65 percent of the inventory by rail, and frankly I would consider that a real good target for them to be shooting for.

Now, the real issue is distance. Over the last 15 years, guess what the average rail

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shipment has been. Three hundred and forty-six miles. In fact, 80 percent of the shipments have been less than 500 miles. And when you look at the truck shipments, you find the average shipment distance has been a little longer, 678 miles; but even there you find that 82 percent of the shipments are less than 900 miles. Now, the average distance for both rail and truck shipments is going to be about 2,200 miles when you average out all the sites in the U.S.. And I would submit that that means greater likelihood of equipment failure, greater likelihood of human error and certainly greater likelihood of bad luck in the way of accidents caused by other vehicles, bad weather, natural disasters and so forth.

Finally, what we haven't talked about, my third point, is if the industry wants to tell us a success story and say, "Base your transportation program on a success story," they have to look no further than the Waste Isolation Pilot Plant in New Mexico. Unfortunately, the DOE has chosen to ignore the lessons learned from the only good transportation campaign that they've planned. Why is that program accepted by the western states affected by it? Why is it endorsed by all the

...1 western governors? We haven't had a governor in Nevada saying anything good about DOE for, you know, many, many years; but they've all endorsed this program. The principles are this: one, the shipping casks were physically tested full scale. Whether they needed to be or not, the demonstration and the proof of the pudding was laid on the table where people could see that the containers actually met the NRC performance standard. Some of these tests are boring, you know. You drop it in one orientation. You pick it up, you drop it again, you drop it again, you roast it and so forth. But, you know, as boring as that may sound,there's nothing in the world like showing people a video that shows honest testing and shows the package surviving. And when the earlier version failed, we found out there was a problem with the O-rings that would allow particles to escape from the package, and that was fixed. So sometimes you learn things. It's just like in the old Sandia tests where we found out that the tie downs that hold the cask to the trailer are just as important as the integrity of the cask. So number one, the WIPP program is accepted because of full-scale testing of the

package.

Number two, routes: the routes have been out there for ten years. They came out in the Draft EIS. Some people didn't like them. Down in New Mexico the routes caused so much controversy that the State Legislature took the authority away from one agency and gave it to another, but in the end they came up with routes that were acceptable to the people of New Mexico. You can't do that unless you're starting with a discussion of the routes and you take input from all parties, and that's how you solve the problem. DOE seems not to have learned the second big lesson from WiPP.

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The third big lesson of WIPP is those regulations that some of you guys in the industry think are great -- well, maybe they are, maybe they aren't. But a big advantage in terms of public credibility came about when the DOE guys on the WIPP program said, "You know what? We're willing to go beyond the minimum that the regulations require in two areas, accident prevention and emergency response.

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And I'm sure I'm close to that five minutes, Barry, so I won't belabor it. Anybody who wants the details, I would be happy to provide them.

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So when somebody comes to you and says here's all this experience in Europe, you ask them to prove to you that the characteristics of the European shipments have some relevance to this. When someone says, oh, we've got this great experience in the U.S., remind them most of the shipments in the U.S. took place over 20 years ago. The great utility people like Howard Schieman (phonetically) from WEPCO and Paul Standish from Westinghouse -- they've all retired; they're not around anymore. One of the problems in the utility business will be they don't have a lot of people who've got hands-on experience with PWR and BWR fuel kind of shipments. But the characteristics of the shipments, I think, are more important than the people; and the characteristics don't tell you anything.

And finally, when somebody says they don't know how to please those people, those crazy people in Nevada who can't seem to find anything good the DOE does, you remind them that the State of Nevada endorsed the transportation and safety protocols that they developed for WIPP. And that's the yardstick that we hope their colleagues at the Office of Civilian Radioactive Waste

...1 Management will eventually wake up and follow the example that has been set. Thank you very much.

MR. LAWSON: The next speaker is Kevin Collins, then Nancy Olsen and Susan Alzner.